

AIRBORNE LIDAR BATHYMETRY EXECUTIVE NOTES



*Joint Airborne Lidar Bathymetry
Technical Center of Expertise*
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Pacific Surveys

The Scanning Hydrographic Operational Airborne Lidar Survey (SHOALS) system recently completed the most extensive survey project yet undertaken by an Airborne Lidar Hydrography system. Taking in 9 Pacific Islands, surveys between Aug 2000 and Feb 2001 for the Naval Oceanographic Office (NAVOCEANO), US Army Corps of Engineers (USACE), National Ocean Service (NOS) and US Geological Survey (USGS), ranged from the approaches to Pearl Harbor in Hawaii to the coastline of Tinian, 4000 mile to the west.



As the only operational ALB system in the USA, SHOALS availability is at a premium. Consequently when faced with the problem of coastal survey requirements spanning the width of the Pacific Ocean, a variety of US Federal agency requirements were consolidated into a single project in order that all could benefit from this US Navy sponsored deployment. The survey produced over 1,100 sq. n.m. of shallow water bathymetry that will be used to produce nautical charts, to plan hurricane evacuation routes, and to study coral reefs. In addition, the data are public domain and available for use in many, many other studies.

The 'Generation-after-Next' System

In early January, the JALBTCX announced plans to develop a family of ALB systems for NAVOCEANO through an international treaty with Canada and Optech Inc, developer of SHOALS. The first of these, the Compact Hydrographic Airborne Rapid Total Survey (CHARTS), incorporating a 1 kHz laser, will be the logical successor to SHOALS for routine conventional survey tasks. It will also be characterized by smaller size and lower power requirements, enabling it to operate from a wide range of aircraft of opportunity. In addition, CHARTS will include a 10 kHz laser for beach and shoreline topographic surveying. Incorporating the technology Optech Inc. developed in their commercially successful ALTM product line, CHARTS will truly be a Rapid Total Survey system for shallow water coastal surveying.



CHARTS' sister, the Bathymetric And Topographic Survey (BATS) system however will be specifically designed for use as a tactical system and is intended to operate on an unmanned aerial vehicle (UAV). Catch our next Executive Notes for more information on the BATS system and when these systems will begin operations.

SHOALS Schedule

SHOALS has just completed its annual maintenance period at John Chance & Associate's Lafayette facility, and will shortly commence a complete survey of the coast of Puerto Rico for the Puerto Rico Planning Board. While in the Caribbean, SHOALS will conduct a coastal survey of Monserrat for the Royal Navy, to aid in locating a new harbor facility following the years of volcanic activity that devastated the existing harbor. The middle of Summer 2001 will be spent in the Great Lakes conducting a regional shoreline survey for the International Joint Commission, through the Buffalo District Corps of Engineers, then on to the Bahamas for additional nautical charting surveys for the U.S. Naval Oceanographic Office.

South Pole Rescue

Kenn Borek Ltd., of Calgary, from whom we contract the SHOALS DHC6/300 Twin Otter, recently hit world headlines with their daring MEDEVAC of Dr Ronald Shemenski from the South Pole. This was the first ever landing at the Pole in winter and temperatures at the time plunged to -68 C (-90.4 F). The aircraft captain was Sean Louttit, KBA's senior pilot, who flew with SHOALS in Hawaii last year, while one of the back-up captains was Matt Gacek who flew with us in 1999. It's comforting to know that we fly with such a professional team and we congratulate KBA on their outstanding achievement.



Conferences and Workshops

The JALBTCX recently coordinated a highly successful workshop on ALB at the Hydrographic Society's 'Hydro 2001' conference in the UK, which included participation from Optech Inc., Tenix-LADS Corp., Saab Dynamics and the Swedish Maritime Administration and was chaired by RADM(ret) Kenneth E. Barbor. It is hoped to jointly host a workshop with the Royal Australian Navy in the Pacific area during the next 12 months. SHOALS will be attending the following conferences over the next few months:

Hydro 2001, Norfolk, VA, May 21-24.

<http://www.thsoa.com/>

Shallow Survey 2001, Portsmouth, NH, Sep, 24-27.

http://www.ccom-jhc.unh.edu/shallow_intro.htm

Measuring the Earth - Digital Elevation Technologies and Applications, St. Petersburg, FL, Oct 31- Nov 2.

<http://www.asprs.org/st.pete/>

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